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EXAMINER	
DEAN, RAYMOND S	

ART UNIT	PAPER NUMBER
2618	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/709,527	DERKS ET AL.	
	Examiner	Art Unit	
	Raymond S. Dean	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 August 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10,19,22-30 and 33-44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10,19,22-30 and 33-44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 May 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1, 22, 33 have been considered but are moot in view of the new ground(s) of rejection.

Examiner respectfully disagrees with Applicants' assertion on Page 12 "However Moskowitz, including the cited passages fails to disclose this ...". Moskowitz specifically teaches that communication between audience devices and the presenter devices can be Bluetooth (See Cols. 3 lines 7 – 13, 7 lines 52 – 58). It is well established in the Bluetooth protocol (See Bluetooth Core Specification at www.bluetooth.com) that there is an Inquiry Procedure wherein the master transmits inquiry messages comprising General Inquiry Access Codes (GIACs) and Dedicated Inquiry Access Codes (DIACs). It is also well established in the Bluetooth protocol that there is a Paging Procedure wherein the master transmits page messages to establish a communication with slave units. The Inquiry signals and the Page signals read on the claimed polling signals.

Examiner respectfully disagrees with Applicants' assertion on Page 13, 2nd Paragraph "Nor does Moskowitz disclose or suggest that the response units ...". It is well established in the Bluetooth protocol that there are Inquiry Response messages and responses to the page messages. Moskowitz thus reads on this particular limitation.

Examiner respectfully disagrees with Applicants' assertion on Page 13, 3rd Paragraph "There is no disclosure in Moskowitz as to how the devices are synchronized

...". It is well established in the Bluetooth protocol that an Inquiry Response comprises a Frequency Hop Synchronization (FHS) packet, which is used for synchronizing the frequency hop channel sequence. This synchronization enables the master and slave to be synchronized for the purpose of transmitting and responding to page signals.

Examiner respectfully disagrees with Applicants assertion on Page 14, 2nd Paragraph "Moreover the references to Bluetooth are not supported by any disclosure ...". Moskowitz, as was stated earlier, specifically teaches that communication between the devices can be Bluetooth (See Cols. 3 lines 7 – 13, 7 lines 52 – 58). The attributes of the claim are recited "verbatim" because the Examiner is attempting to explain in the clearest, most explicit, manner how and why the citations read on the claim limitations and, more specifically, how and why the Bluetooth specification reads on said claim limitations.

Applicants assert on Page 15 "A communication system of the type claimed in the rejected claims may use many more ... and retrieves at data speeds that are ...". These particular features are, however, not explicitly claimed.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 7 – 10, 19, 22, 29 – 30, 33, 43 – 44 are rejected under 35 U.S.C. 102(e) as being anticipated by Moskowitz et al. (US 6,654,588).

Regarding Claim 1, Moskowitz teaches a wireless communication system, comprising: at least one base unit and a plurality of handheld response units communicating with said at least one base unit over at least one wireless communication link (Figure 1, Cols. 2 lines 43 – 50, lines 58 – 67, 3 line 1, lines 7 – 13); said at least one base unit sending polling signals to said response units over said at least one wireless communication link (Cols. 7 lines 44 – 52, 9 lines 24 – 28, lines 33 – 44); said response units sending response data to said at least one base unit over said at least one wireless communication link in response to one of the polling signals, the response data being entered in the respective response unit by a user (Cols. 6 lines 55 – 59, 9 lines 24 – 28, lines 33 – 44); and said at least one communication link comprising at least one base transceiver at said at least one base unit and a plurality of response transceivers, each at one of said response units, said polling signals and said slave unit responses being according to a spread-spectrum frequency hopping protocol (Figure 1, Cols. 2 lines 43 – 50, lines 58 – 67, 3 line 1, 4 lines 22 – 24, Bluetooth is a frequency hopping spread spectrum protocol), wherein said at least one base unit adapted to synchronize said response units to respond to the polling signals (Cols. 3 lines 7 – 13, 7 lines 52 – 58, it is well established in the Bluetooth protocol that an Inquiry Response comprises a Frequency Hop Synchronization (FHS) packet, which is used for synchronizing the frequency hop channel sequence, this synchronization

enables the master and slave to be synchronized for the purpose of transmitting and responding to page signals), wherein said polling signals include at least one initial transmission and a master transmission (Cols. 3 lines 7 – 13, 7 lines 52 – 58, the Bluetooth protocol comprises Inquiry messages and Page messages, the initial transmission is the Inquiry message and the master transmission in the Page message), wherein said polling signals being on multiple different hop frequencies (Cols. 3 lines 7 – 13, 7 lines 52 – 58, in the Bluetooth protocol the Inquiry message is repeatedly transmitted at different hop frequencies), wherein said at least one initial transmission containing information regarding the hop frequency of the master transmission (Cols. 3 lines 7 – 13, 7 lines 52 – 58, in the Bluetooth protocol the Inquiry hop sequence is derived from the Lower Address Part (LAP) of the GIAC, determining the hop sequence comprises determining the hop frequencies) and wherein said response units are adapted to receive the at least one initial transmission and to use the information contained in the received initial transmission in order to respond to the polling signal (Cols. 3 lines 7 – 13, 7 lines 52 – 58, in the Bluetooth protocol the GIACs and DIACs are transmitted to the devices, said devices will transmit Inquiry Response messages based upon reception of the GIAC or DIAC and the access code that makes up the GIAC or DIAC).

Regarding Claim 22, Moskowitz teaches a wireless communication system, comprising: at least one master unit and a plurality of slave units communicating with said at least one master unit over at least one wireless communication link (Figure 1, Cols. 2 lines 43 – 50, lines 58 – 67, 3 line 1, lines 7 – 13); said at least one master unit

sending polling signals to said slave units over said at least one wireless communication link (Cols. 7 lines 44 – 52, 9 lines 24 – 28, lines 33 – 44); said slave units sending data to said at least one master unit over said at least one wireless communication link in response to one of the polling signals (Cols. 6 lines 55 – 59, 9 lines 24 – 28, lines 33 – 44); said at least one communication link comprising at least one master transceiver at said at least one base unit and a plurality of slave transceivers, each at one of said slave units (Figure 1, Cols. 2 lines 43 – 50, lines 58 – 67, 3 line 1, lines 7 – 13); said at least one master transceiver sending polling signals and said slave transceivers sending data in response to the polling signals, said polling signals and said unit responses being according to a spread-spectrum frequency hopping protocol (Figure 1, Cols. 2 lines 43 – 50, lines 58 – 67, 3 line 1, 4 lines 22 – 24, in the Bluetooth protocol the Inquiry message is repeatedly transmitted at different hop frequencies), wherein said polling signals include at least one initial transmission and a master transmission (Cols. 3 lines 7 – 13, 7 lines 52 – 58, the Bluetooth protocol comprises Inquiry messages and Page messages, the initial transmission is the Inquiry message and the master transmission in the Page message), wherein said polling signals being on multiple different hop frequencies (Cols. 3 lines 7 – 13, 7 lines 52 – 58, in the Bluetooth protocol the Inquiry message is repeatedly transmitted at different hop frequencies), wherein said at least one initial transmission containing information regarding the hop frequency of the master transmission (Cols. 3 lines 7 – 13, 7 lines 52 – 58, in the Bluetooth protocol the Inquiry hop sequence is derived from the Lower Address Part (LAP) of the GIAC, determining the hop sequence comprises determining

the hop frequencies) and wherein said slave units are adapted to receive the at least one initial transmission and to use the information contained in the received initial transmission in order to respond to the polling signal (Cols. 3 lines 7 – 13, 7 lines 52 – 58, in the Bluetooth protocol the GIACs and DIACs are transmitted to the devices, said devices will transmit Inquiry Response messages based upon reception of the GIAC or DIAC and the access code that makes up the GIAC or DIAC).

Regarding Claim 33, Moskowitz teaches a wireless communication system, comprising: at least one master unit and a plurality of slave units communicating with said at least one master unit over at least one wireless communication link (Figure 1, Cols. 2 lines 43 – 50, lines 58 – 67, 3 line 1, lines 7 – 13); said at least one master unit sending polling signals to said slave units over said at least one wireless communication link (Cols. 7 lines 44 – 52, 9 lines 24 – 28, lines 33 – 44); said slave units sending data to said at least one master unit over said at least one wireless communication link in response to one of the polling signals (Cols. 6 lines 55 – 59, 9 lines 24 – 28, lines 33 – 44); said at least one communication link comprising at least one master transceiver at said at least one master unit and a plurality of slave transceivers, each at one of said slave units (Figure 1, Cols. 2 lines 43 – 50, lines 58 – 67, 3 line 1, lines 7 – 13); and said at least one master transceiver and said slave transceivers communicating with a spread-spectrum frequency hopping protocol (Figure 1, Cols. 2 lines 43 – 50, lines 58 – 67, 3 line 1, 4 lines 22 – 24), said protocol comprising a home frequency (Col. 3 lines 7 – 13, in Bluetooth the masters will transmit an inquiry at a particular frequency and a slave will receive said inquiry at said

frequency, which is the home frequency), wherein said at least one master transceiver transmits an initial transmission at said home frequency and a master transmission at a hop frequency (Col. 3 lines 7 – 13, 4 lines 22 – 24, in Bluetooth the masters will transmit an inquiry at a particular frequency and a slave will receive said inquiry at said frequency, which is the home frequency), said initial transmission at said home frequency transmitting a designation of the hop frequency to said slave units, said master transmission transmitting data to said slave units (Cols. 3 lines 7 – 13, 4 lines 22 – 24, in Bluetooth the Frequency Hop (FH) channel is determined by the identity of the master and phase in the frequency hop sequence, which is determined by the master's system clock, thus the identity of the master and master's system clock is the designation of the hop frequency).

Regarding Claim 7, Moskowitz teaches all of the claimed limitations recited in Claim 1. Moskowitz further teaches at least one base microcomputer at said at least one base unit (Figure 3, Col. 4 lines 58 – 64) and a plurality of response microcomputers, each at one of said response units (Figure 4, Col. 6 lines 49 – 52).

Regarding Claim 8, Moskowitz teaches all of the claimed limitations recited in Claim 7. Moskowitz further teaches a frequency hop table at said at least one base unit (Cols. 3 lines 7 – 13, 4 lines 22 – 24, in Bluetooth the Frequency Hop (FH) channel is determined by the by the identity of the master and phase in the frequency hop sequence, which is determined by the master's system clock thus there will be a FH table at the master).

Regarding Claim 9, Moskowitz teaches all of the claimed limitations recited in Claim 8. Moskowitz further teaches wherein said response units communicating with said at least one base transceiver without direct access to a said frequency hop table (Cols. 3 lines 7 – 13, 4 lines 22 – 24, in Bluetooth the slaves recreate the master clock, the slaves use said clock and the identity of the master in order to determine the FH channel).

Regarding Claim 10, Moskowitz teaches all of the claimed limitations recited in Claim 9. Moskowitz further teaches wherein said protocol comprising a home frequency, wherein said initial transmission being at said home frequency (Col. 3 lines 7 – 13, in Bluetooth the masters will transmit an inquiry at a particular frequency and a slave will receive said inquiry at said frequency, which is the home frequency) and said response transceivers attempt to receive said initial transmission at said home frequency (Col. 3 lines 7 – 13, in Bluetooth the masters will transmit an inquiry at a particular frequency and a slave will receive said inquiry at said frequency, which is the home frequency).

Regarding Claims 19, Moskowitz teaches all of the claimed limitations recited in Claim 1. Moskowitz further teaches wherein said frequency hopping protocol comprises a particular number of different frequency hops and wherein said initial transmission has a duration that is related to a duration of said base transmission as a function of the number of different frequency hops (Col. 4 lines 22 – 24, in Bluetooth the channel is divided into consecutive slots, each slot lasting 625 microseconds, a

different hop channel is used for each slot which gives a nominal hop rate of 1600 hops/second, the duration is 625 microseconds).

Regarding Claims 29, 43, Moskowitz teaches all of the claimed limitations recited in Claims 22, 33. Moskowitz further teaches wherein said slave units comprise user response units and wherein said response units send response data to said at least one master unit over said at least one wireless communication link in response to one of the polling signals, the response data being entered in the respective response unit by a user (Cols. 6 lines 55 – 59, 9 lines 24 – 28, lines 33 – 44).

Regarding Claim 30, Moskowitz teaches all of the claimed limitations recited in Claim 22. Moskowitz further teaches wherein said at least one master transceiver transmits a master transmission at the hop frequency, said master transmission transmitting data to said slave units (Cols. 2 lines 43 – 50, 4 lines 22 – 24).

Regarding Claim 44, Moskowitz teaches all of the claimed limitations recited in Claim 33. Moskowitz further teaches wherein said slave units sending data to said at least one master unit over said at least one wireless communication link at one or more hop frequencies (Cols. 2 lines 58 – 67, 3 line 1, 4 lines 22 – 24).

4. Claims 2 – 6, 23 – 28, 34 – 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moskowitz et al. (US 6,654,588) in view of Rune (US 2003/0060222).

Regarding Claims 2, 23, 34, Moskowitz teaches all of the claimed limitations recited in Claims 1, 22, 33. Moskowitz does not teach wherein said at least one base/master transceiver comprising a plurality of base/master transceivers at said at

least one base unit, said base/master transceivers adapted to send polling signals having a particular temporal relationship with each other.

Rune teaches at least one base/master transceiver comprising a plurality of base/master transceivers at said at least one base unit, said base/master transceivers being synchronized in order to send polling signals having a particular temporal relationship with each other (Figure 10, Section 0051, each of the inquiry transceivers transmit polling signals, the transceivers will be synchronized via the different clock offsets thus enabling each transceiver in end up in a different phase in the scan cycle).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the plurality of transceivers of Rune in the system of Moskowitz for the purpose of increasing the speed at which masters and slaves discover each other and establish communication while maintaining high rates of data transfer between masters and slaves as taught by Rune.

Regarding Claims 3, 24, 35, Moskowitz in view of Rune teaches all of the claimed limitations recited in Claims 2, 23, 34. Moskowitz further teaches wherein said base/master transceivers transmitting on common hop frequencies (Col. 3 lines 7 – 13, 4 lines 22 – 24, in Bluetooth the masters will transmit an inquiry at a particular frequency and a slave will receive said inquiry at said frequency, which is the hop frequency).

Regarding Claims 4, 25, 41, Moskowitz teaches all of the claimed limitations recited in Claims 1, 22, 33. Moskowitz does not teach wherein said at least one base/master transceiver comprising a plurality of base/master transceivers at said at

least one base unit, said plurality of base/master transceivers transmitting on separate hop frequencies.

Rune teaches wherein said at least one base/master transceiver comprising a plurality of base/master transceivers at said at least one base unit, said plurality of base/master transceivers transmitting on separate hop frequencies (Figure 10, Section 0051, different frequencies thus different channels).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the plurality of transceivers of Rune in the system of Moskowitz for the purpose of increasing the speed at which masters and slaves discover each other and establish communication while maintaining high rates of data transfer between masters and slaves as taught by Rune.

Regarding Claims 5, 26, 42, Moskowitz in view of Rune teaches all of the claimed limitations recited in Claims 4, 25, 41. Moskowitz further teaches wherein said at least one base/master unit comprises a plurality of base/master units, each of said base/master transceivers at one of said base/master units (Col. 4 lines 22 – 25, scatternet, which comprises Piconet A and B, each Piconet will have a master).

Regarding Claims 6, 28, Moskowitz in view of Rune teaches all of the claimed limitations recited in Claims 4, 27. Moskowitz further teaches wherein said plurality of base units operate from a common frequency hop table (Col. 3 lines 7 – 13, the hop table in Bluetooth comprises 79 hop channels).

Regarding Claim 27, Moskowitz in view of Rune teaches all of the claimed limitations recited in Claim 25. Moskowitz further teaches wherein each of said base

units has a home frequency that is different than the home frequency of other base units (Col. 3 lines 7 – 13, in Bluetooth the masters transmit inquiries on different channels or frequencies, which are the home frequencies).

Regarding Claims 36, 39, Moskowitz in view of Rune teaches all of the claimed limitations recited in Claim 35. Moskowitz further teaches wherein one of said plurality of master transceivers sends said initial transmission designating said hop frequency to said slave units (Cols. 3 lines 7 – 13, 4 lines 22 – 24, in Bluetooth the Frequency Hop (FH) channel is determined by the identity of the master and phase in the frequency hop sequence, which is determined by the master's system clock, thus the identity of the master and master's system clock is the designation of the hop frequency), and wherein said plurality of master transceivers transmit at the hop frequency (Col. 4 lines 22 – 24).

Regarding Claim 37, Moskowitz in view of Rune teaches all of the claimed limitations recited in Claim 36. Moskowitz further teaches wherein said plurality of master transceivers alternate sending said initial transmission (Col. 4 lines 22 – 25, the masters can transmit inquiries at different times thus there can be a scenario of alternate sending of inquiries).

Regarding Claim 38, 40, Moskowitz in view of Rune teaches all of the claimed limitations recited in Claims 36, 39. Moskowitz further teaches wherein said frequency hopping protocol comprises a particular number of different frequency hops and wherein said initial transmission has a duration that is related to a duration of said base transmission as a function of the number of different frequency hops (Col. 4 lines 22 –

24, in Bluetooth the channel is divided into consecutive slots, each slot lasting 625 microseconds, a different hop channel is used for each slot which gives a nominal hop rate of 1600 hops/second, the duration is 625 microseconds).

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond S. Dean whose telephone number is 571-272-7877. The examiner can normally be reached on Monday-Friday 6:00-2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban can be reached on 571-272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Raymond S. Dean
October 22, 2007

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